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EXAMINER

CHORBAJI, MONZER R

ART UNIT PAPER NUMBER

1744

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,660

Applicant(s)

ELDRED, BRADLEY J.

Examiner

MONZER R. CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67-69 is/are allowed.
- 6) ☒ Claim(s) 1-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This final action is in response to the Amendment received on 07/12/2005

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2, 4-7 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397).

On page 7, numbered lines 20-25, the specification teaches that copper is used to treat drinking water. Also, on pages 5-6, the specification teaches that it is known to combine metals and plant extracts, to combine metals and alcohols and to combine plant extracts and alcohols as compositions for treating waters. The Tomoika reference, which is in the art of designing antibacterial and antifungal compositions, discloses a

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composition that includes metals (col.4, lines 4-5), an alcohol (col.5, lines 59-60) and a plant extract (col.3, line 54). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine components known as being individual disinfectants as disclosed in the specification since including metals with plant extracts results in a composition having broader antibacterial and antifungal spectrum than being individual (col.3, lines 60-64).

With respect to claims 1-2, both the admitted state of the prior art and the Tomoika reference fail to explicitly disclose specific concentration values for metal ions, plant extracts and alcohols; however the Yahya reference teaches that the concentration range for silver ions is between 5-90 microgram/L (0.005-0.09 mg/L) where such a concentration range will not exceed the upper concentration value for silver or 0.75 mg/L as recited in claims 1-2. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the metal ions concentration values of the Tomoika reference as taught by the Yahya reference since at such concentration values the composition can achieve 99.99% microbial reduction at much lesser time (col.3, lines 33-38).

With respect to claims 1-2, the Yahya reference fails to disclose concentration ranges for plant extracts and for alcohol; however, the abstract of the Japanese reference, which is in the art of designing aqueous deodorization compositions, teaches combining plant extracts and alcohols at concentration values that do not exceed 110 mg/L for plant extracts and 220 mg/L for alcohols (abstract, lines 1-12) as recited in claims 1-2, where plant extract samples and alcohol samples are disclosed (abstract,

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lines 4-12). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the intrinsic concentration values for plant extracts and alcohols of the admitted state of the prior art to concentration values not to exceed the recited values in claims 1-2, 110 mg/L of plant extracts and not to exceed 220 mg/L of alcohols, as taught by the abstract of the Japanese reference since at lower plant extracts and alcohols concentration values, the composition has deodorization benefits (abstract, lines 1-4).

With respect to claims 4-7 and 10-11, the specification on pages 7 and 9, teaches that metals such as silver and copper are used to treat water.

4. Claims 13-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claims 1-2 and further in view of Terry et al (U.S.P.N. 6,596,401).

With respect to claims 13-15 and 17-18, the specification, the Tomioka reference, the Yahya reference and the Japanese abstract teach using alcohols and plant extracts, but fail to teach using glycerol as an alcohol and using citrus fruits. The Terry reference, which is in the art of designing antifouling and algacide compositions, teaches the use of glycerol (col.1, lines 55-56, Glycerin is a synonym for glycerol) and citrus fruits, i.e., grapefruit seed extract (col.16, lines 1-2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one conventional alcohol and plant extract in the composition of the specification for another

since alcohols acts as stabilizing agents (col.8, lines 40-43) and plants extracts act as active agents (col.13, lines 28-31) as taught by the Terry reference.

5. Claims 19-20, 26, 31-32, 35, 38, 61-62 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claims 1-2 and further in view of Arata (U.S.P.N. 6,197,814).

With respect to claims 19-20, 26, 31-32, 35, 38, 61-62 and 64-65, the specification on page 7, numbered lines 20-25, teaches that copper is used to treat drinking water. Also, on pages 5-6, the specification teaches that it is known to combine metals and plant extracts and to combine metals and alcohols as compositions for treating waters. With respect to claims 19-20, 26, 31-32, 35, 38, 61-62 and 64-65, the specification, the Yahya reference and the Japanese reference all fail to teach the following: mixing the selected components together, applying the mixture onto the surface of a user selected item, using a disinfectant such as recited in claims 31-32 and placing the mixture in a filtration device in order for the fluid to pass through the filter and dissolve the mixture. With respect to claims 31-32, the Tomioka reference teaches using a halogen from the periodic table of the elements (col.7, lines 39-41) and plant extracts as an antibacterial and antifungal components. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include more conventional antibacterial agents in the composition of the specification as

taught by the Tomioka reference since such an inclusion results in a composition having broader antibacterial and antifungal spectrum than being individual (col.3, lines 60-64).

However, with respect to claims 19-20, 26, 35, 38, 61-62 and 64-65, the Tomioka reference fails to teach the following: mixing the selected components together, applying the mixture onto the surface of a user selected item and placing the mixture in a filtration device in order for the fluid to pass through the filter and dissolve the mixture. The Arata reference, which is in the art of treating potable water, teaches the following: the concept of mixing the selected components together (col.12, lines 47-58), applying the mixture onto the surface of a user selected item (col.6, lines 8-11) and placing the mixture in a filtration device and recirculating the fluid in order to increase the concentration of the disinfectant (col.8, lines 52-64), which intrinsically result in dissolving the mixture. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by including a filtration step as taught by the Arata reference in order to remove unwanted particles from the disinfectant.

6. Claims 22-23, 25, 34, 37, 43-44, 46, 52-53 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) and Arata (U.S.P.N. 6,197,814) as applied to claims 1-2, 19-20 and 31-32 and further in view of Terry et al (U.S.P.N. 6,596,401).

With respect to claims 22-23, 25, 34, 37, 43-44, 46, 52-53 and 55-56, the specification, the Tomioka reference, the Yahya reference and the Japanese abstract all

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fail to teach the following: infusing the mixture into a user selected item, applying the mixture onto the surface of a user selected item and exposing the mixture infused item to radiation treatment. With respect to claims 22-23, 25, 34, 37, 46, 52-53 and 55-56, the Arata reference teaches applying the mixture to surfaces of machines in food processing plants. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition to surfaces of machines in food processing plants as taught by the Arata reference in order to prevent cross contamination of food products.

The Arata reference fails to teach the following with respect to claims 43-44, 46, 52-53 and 55-56, infusing the mixture into a user selected item and exposing the mixture infused item to radiation treatment. With respect to claims 43-44, 46, 52-53 and 55-56, the Terry reference teaches that it is known to infuse medical devices with silver metal (col.3, lines 47-48) and that it is also known to expose coated medical devices ultraviolet radiation (col.2, lines 42-44). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition into objects and then irradiating the objects since it is known that radiation helps different materials to bond together (col.2, lines 40-43).

7. Claims 24, 27, 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP

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07062397) as applied to claims 19, 20, 31 and 32 and further in view of Arata (U.S.P.N. 6,197,814).

With respect to claims 24, 27, 36 and 39, the specification, the Tomioka reference, the Japanese reference and the Arata reference all fail to teach dissolving the mixture; however, the Yahya reference, which is in the art of disinfecting drinking water, teaches dispersing silver chloride, which is a white granular water soluble powder, in water (col.4, lines 35-41). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by substituting silver chloride powder for electrolytic means as source for silver ions since such a substitution is a matter of choice of design as evidenced by the Yahya reference.

8. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) and Arata (U.S.P.N. 6,197,814) as applied to claim 20 and further in view of Terry et al (U.S.P.N. 6,596,401).

With respect to claim 47, the specification, the Tomioka reference, the Yahya reference and the Japanese reference all fail to teach applying the mixture onto a surface and then irradiating the mixture. The Arata reference teaches applying the mixture to surfaces of machines in food processing plants (col.6, lines 8-11), but fails to teach irradiating the mixture. The Terry reference teaches that it is known to irradiate surfaces of medical devices coated with materials. Thus, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition onto objects and then irradiating the objects since it is known that radiation helps different materials to bond together (col.2, lines 40-43).

9. Claims 45, 48, 54 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Tomioka et al (U.S.P.N. 5,510,109), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) and Arata (U.S.P.N. 6,197,814) as applied to claims 19-20 and 31-32 and further in view of Hiroshi (JP 40525358 A1).

With respect to claims 45, 48, 54 and 57, the specification, the Tomioka reference, the Yahya reference, the Japanese abstract and the Arata reference all fail to combine adding metal ions with irradiation treatment. However, the Hiroshi reference, which is in the art of treating wastewater, teaches adding metals such as copper to a body of water then irradiating (abstract, lines 1-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by irradiating water body that contains copper ions present therein as taught by the Hiroshi reference since such a water treatment method is extremely economic for it uses small amount of copper salt (abstract, lines 9-11).

10. Claims 3, 8-9, 12, 21, 29-30 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397).

With respect to claim 3, on page 7, numbered lines 20-25, the specification teaches that copper is used to treat drinking water. Also, on pages 5-6, the specification teaches that it is known to combine metals and plant extracts and to combine metals and alcohols as compositions for treating waters. The Arata reference, which is in the art of treating drinking water, teaches that silver ions (col.12, lines 22-27) are combined with ethyl alcohol (col.6, lines 55-56). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine silver ions with alcohol to treat drinking water as taught by the Arata reference since the addition of ethanol in combination with other components have resulted in the higher reduction values of microorganisms (col.13, lines 52-56) than other compositions not including ethanol.

With respect to claim 3, both the admitted state of the prior art and the Arata reference fail to explicitly disclose specific concentration values for metal ions, plant extracts and alcohols; however the Yahya reference teaches that the concentration range for silver ions is between 5-90 microgram/L (0.005-0.09 mg/L) where such a concentration range will not exceed the upper concentration value for silver or 0.75 mg/L as recited in claims 1-2. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the metal ions concentration values of the Arata reference as taught by the Yahya reference since at such concentration values the composition can achieve 99.9% microbial reduction at much lesser time (col.3, lines 33-38).

With respect to claim 3, the Yahya reference fails to disclose a concentration range for alcohol; however, the abstract of the Japanese reference, which is in the art of designing aqueous deodorization compositions, teaches preparing a deodorizing composition that includes alcohols at concentration values that do not exceed 220 mg/L (abstract, lines 1-12) as recited in claim 3, where alcohol samples are disclosed (abstract, lines 4-12). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the intrinsic concentration values for alcohols of the admitted state of the prior art to concentration values not to exceed the recited value in claim 3, 220 mg/L of alcohols, as taught by the abstract of the Japanese reference since at alcohol concentration values, the composition has deodorization benefits (abstract, lines 1-4).

With respect to claims 8-9 and 12, the specification on pages 7 and 9, teaches that metals such as silver and copper are used to treat water.

With respect to claims 21, 29 and 63, the specification fails to teach the following: mixing the selected components together, applying the mixture onto the surface of a user selected item and placing the mixture in a filtration device in order for the fluid to pass through the filter and dissolve the mixture. The Arata reference, which is in the art of treating potable water, teaches the following: the concept of mixing the selected components together (col.12, lines 47-58), applying the mixture onto the surface of a user selected item (col.6, lines 8-11) and placing the mixture in a filtration device and recirculating the fluid in order to increase the concentration of the disinfectant (col.8, lines 52-64), which intrinsically result in dissolving the mixture. Thus, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by including a filtration step as taught by the Arata reference in order to remove unwanted particles from the disinfectant.

With respect to claim 30, the specification, the Arata reference and the Japanese abstract all fail to teach dissolving the mixture; however, the Yahya reference, which is in the art of disinfecting drinking water, teaches dispersing silver chloride, which is a white granular water soluble powder, in water (col.4, lines 35-41). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by substituting silver chloride powder for electrolytic means as source for silver ions since such a substitution is a matter of choice of design as evidenced by the Yahya reference.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claim 3 and further in view of Tomioka et al (U.S.P.N. 5,510,109)

With respect to claim 33, the specification on page 7, numbered lines 20-25, teaches that copper is selected to treat drinking water. Also, on pages 5-6, the specification teaches that it is known to combine (mix) metals and plant extracts and to combine (mix) metals and alcohols as compositions for treating waters. With respect to claim 33, the specification, the Arata reference, the Yahya reference and the Japanese abstract all fail to teach selecting plant extract and selecting a disinfectant such as recited in disinfecting group in claim 33. The Tomioka reference teaches using a

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halogen from the periodic table of the elements (col.7, lines 39-41) and plant extracts as an antibacterial and antifungal components. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include more conventional antibacterial agents in the composition of the specification as taught by the Tomioka reference since such an inclusion results in a composition having broader antibacterial and antifungal spectrum than being individual (col.3, lines 60-64).

12. Claims 16, 28 and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claims 3 and 21 and further in view of Terry et al (U.S.P.N. 6,596,401).

With respect to claims 16, 28 and 49-50, the specification on pages 6-7 teaches that glycerol is used in treating water, but the specification, the Yahya reference and the Japanese abstract all fail to teach the following: infusing the mixture into a user selected item, applying the mixture onto the surface of a user selected item and exposing the mixture infused item to radiation treatment. With respect to claims 16, 28 and 49-50, the Arata reference teaches applying the mixture to surfaces of machines in food processing plants. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition to surfaces of machines in food processing plants as taught by the Arata reference in order to prevent cross contamination of food products.

The Arata reference fails to teach with respect to claims 49-50, infusing the mixture into a user selected item and exposing the mixture infused item to radiation treatment. The Terry reference teaches the following: that it is known to infuse medical devices with silver metal (col.3, lines 47-48) and that it is also known to expose coated medical devices ultraviolet radiation (col.2, lines 42-44). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition into objects and then irradiating the objects since it is known that radiation helps different materials to bond together (col.2, lines 40-43).

13. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claim 21 and further in view of and Hiroshi (JP 40525358 A1).

With respect to claim 51, the specification, the Arata reference, the Yahya reference and the Japanese abstract all fail to combine adding metal ions with irradiation treatment. However, the Hiroshi reference, which is in the art of treating wastewater, teaches adding metals such as copper to a body of water then irradiating (abstract, lines 1-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by irradiating water body that contains copper ions present therein as taught by the Hiroshi reference since such a water treatment method is extremely economic for it uses small amount of copper salt (abstract, lines 9-11).

14. Claims 40-41 and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) and Tomioka et al (U.S.P.N. 5,510,109) as applied to claim 33 and further in view of Terry et al (U.S.P.N. 6,596,401).

With respect to claims 40-41 and 58-59, the specification, the Arata reference, the Yahya reference, the Japanese reference and the Tomioka reference all fail to teach the following: infusing the mixture into a user selected item, applying the mixture onto the surface of a user selected item and exposing the mixture infused item to radiation treatment. With respect to claims 40-41 and 58-59, the Terry reference teaches the following: that it is known to infuse medical devices with silver metal (col.3, lines 47-48), applying a mixture that includes metal ions alcohols and a plant extract to a use selected item (col.6, lines 8-10) and that it is known to expose coated medical devices ultraviolet radiation (col.2, lines 42-44). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by applying the composition into objects and then irradiating the objects since it is known that radiation helps different materials to bond together (col.2, lines 40-43).

15. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626) and the abstract of Japanese reference (JP 07062397) as applied to claim 33 and in view of Tomioka et al (U.S.P.N. 5,510,109).

With respect to claim 42, the specification, the Arata reference, the Japanese reference and the Tomioka reference all fail to teach dissolving the mixture; however, the Yahya reference, which is in the art of disinfecting drinking water, teaches dispersing silver chloride, which is a white granular water soluble powder, in water (col.4, lines 35-41). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by substituting silver chloride powder for electrolytic means as source for silver ions since such a substitution is a matter of choice of design as evidenced by the Yahya reference.

16. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) and Tomioka et al (U.S.P.N. 5,510,109) as applied to claim 33 and further in view of Hiroshi (JP 40525358 A1).

With respect to claim 60, the specification, the Arata reference, the Yahya reference, the Japanese abstract and the Tomioka reference all fail to combine adding metal ions with irradiation treatment. However, the Hiroshi reference, which is in the art of treating wastewater, teaches adding metals such as copper to a body of water then irradiating (abstract, lines 1-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by irradiating water body that contains copper ions present therein as taught by the Hiroshi reference since such a water treatment method is extremely economic for it uses small amount of copper salt (abstract, lines 9-11).

17. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art in view of Arata (U.S.P.N. 6,197,814), Yahya et al (U.S.P.N. 5,217,626), the abstract of Japanese reference (JP 07062397) as applied to claim 33 and further in view of Tomioka et al (U.S.P.N. 5,510,109)

With respect to claim 66, the specification, the Yahya reference, the Japanese reference and the Tomioka reference all fail to teach placing the mixture in a filtration device in order for the fluid to pass through the filter and dissolve the mixture. The Arata reference, which is in the art of treating potable water, teaches placing the mixture in a filtration device and recirculating the fluid in order to increase the concentration of the disinfectant (col.8, lines 52-64), which intrinsically result in dissolving the mixture. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the specification by including a filtration step as taught by the Arata reference in order to remove unwanted particles from the disinfectant.

Allowable Subject Matter

18. Claims 67-69 are allowed.

19. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 67-69, the prior art does not teach nor provide a motivation for the recited upper limit on the concentration ranges of copper or silver ions, grapefruit seed extract and glycerin.

Response to Arguments

20. Applicant's arguments filed 07/12/2005 have been fully considered but they are not persuasive.

The abstract of the Japanese (JP 07062397) reference, which is in the art of designing aqueous deodorization compositions, is applied in this final office action since it teaches combining plant extracts and alcohols at concentration values that do not exceed 110 mg/L for plant extracts and 220 mg/L for alcohols (abstract, lines 1-12) as recited in claims 1-2, where plant extract samples and alcohol samples are disclosed (abstract, lines 4-12).

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R. CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN KIM can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744
10/03/2005


JOHN KIM
SUPERVISORY PATENT EXAMINER